

Abstract of the Disclosure

An apparatus and method for protecting synchronous generators against off-nominal frequency deviation and alternating forces excitation is provided. Particular application can be found with generators within a power generator plant integrated into a power transmission grid system. A electrical relay system is in operative association with an electrical signal representative of an actual frequency at which the generator is operating and to an electrical signal representative of an actual forcing amount at which the generator is operating. The relay system is adapted to respond to the actual frequency signal and the actual forcing signal such that the relay system compares the actual frequency signal with a predetermined desired frequency range and compares the actual forcing signal with at least one predetermined forcing amount, and selectively alarms the unit operator or trips the generator to an off-line mode depending upon the comparisons.